

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-144698

(43)Date of publication of application : 28.05.1999

(51)Int.Cl.

H01M 2/16  
H01M 10/30

# 4

(21)Application number : 09-302411

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(22)Date of filing : 05.11.1997

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## (54) SEPARATOR FOR SECONDARY BATTERY

## (57)Abstract:

PROBLEM TO BE SOLVED: To provide a separator for a secondary battery which can be manufactured in such a manner that hydrophilicity can be added in a state of fiber before an end product, an arbitrary control for enlarging or reducing a specific surface area of fiber can be performed, and a process of adding hydrophilicity, for example, an economical noncontact sulfonation process can be performed without a strong oxidizing power.

SOLUTION: The separator for secondary battery includes a polyolefine fiber to which hydrophilicity has been added and fiber for contact and is manufactured in a wet multi-layer. The polyolefine fiber to which hydrophilicity has been added is made of a plurality of kinds of polypropylene fiber each of which has a different thickness. A specific surface area of at least one kind polypropylene fiber among a plurality of kinds of polypropylene fiber each of which has a different thickness has a value which is equal to or larger than 1.5 m<sup>2</sup>/g. A process for adding hydrophilicity is based on system of a non-contact sulfonation process. The noncontact sulfonation process is subjected to a surface of the polyolefine fibril and a surface of the fiber for contact, and to thereby enable a process of gradually adding hydrophilicity under control. The noncontact sulfonation process consumes small energy to facilitate a later process.

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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